DETAILED ACTION

1. The office action as mailed 15 October 2007 is withdrawn.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Lehrman et al. (US 6307481).

- Regarding claim 1, Lehrman teaches a system (11) taken to be the monitoring apparatus for evaluating body movement (Figure 1). The system comprises a sensor (25) disclosed as an accelerometer (column 5, line 2), and a processor (47) coupled to an RF transmitter including an RF modulator (61) for wireless association or communication to a controller or receiving unit (column 3, lines 18-19) (Figs 4, 2). He teaches the modulator having communications, such as a call for help, to a remote receiver unit (103) (Figure 6) (column 9, lines 33-45). He teaches that the processor has capability to generate state indicia taken to be performance indicia from sensed accelerative indicia (column 6, lines 6-8). He also teaches the processor (47) using outputs from the accelerometer to determine a last stable position and saving it (columns 7-8, lines 60-65

and 4-6). The last stable position is taken to be the threshold. He teaches the processor capable of comparing a set of post impact samples from the accelerometer to a threshold to see if it they exceed the threshold in which case an alert stage is activated, taken to be an event (column 8, lines 12-21).

- Regarding claim 2, Lehrman teaches summing outputs from the accelerometer to determine the last stable position or threshold (column 7, lines 60-67). It is inherent that summing would require more than one, or a plurality of these outputs.
- Regarding claim 7, Lehrman teaches a wireless network connecting the processor and controller (column 3, lines 18-19). As noted earlier, the modulator having communications, such as a call for help, to a remote receiver unit (103) (Figure 6) (column 9, lines 33-45).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 3-6 and 10-16, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lehrman as applied to claim 1 above, and further in view of Petelenz et al. (2001/0004234).

- Regarding claim 3, Lehrman fails to acknowledge a capability of initiating an event after performance indicia is above or below a threshold for a designated period of time. Petelenz teaches a fall monitoring device with an accelerometer unit [0025] that requires the fall duration be less than a determined time threshold for an uncontrolled fall to have taken place; the fall being determined by angular rate of body angle and acceleration amplitudes [0007]. It would have been obvious in view of Petelenz for Lehrman's apparatus to have these performance capabilities in order to ensure that the change of acceleration is consistent with a fall.
- Regarding claim 4, Lehrman teaches a threshold of 2 seconds [0029] to be assumed. He doesn't teach how this is reached, but it would have been obvious to one having ordinary skill in the art to determine the time period by timing how long it takes people to fall.
- Regarding claim 5, Lehrman doesn't teach that the accelerometer determines acceleration in three orthogonal directions. However, the accelerometer unit of Petelenz's apparatus "measures three orthogonal accelerations" [0025]. It would have been obvious to apply this to Lehrman's tool in order to determine the body's three-dimensional movement.
- Regarding claim 6, the Lehrman doesn't teach one of the three orthogonal directions to be in the vertical direction or within a designated angle of the vertical direction. Petelenz's apparatus teaches that one of the axes of the accelerometer is "more or less vertical" [0025]. It would have been obvious in

view of Petelenz to make an axis vertical to determine if vertical acceleration was taking place.

- Regarding claims 10 and 13-14, the apparatus of Lehrman doesn't provide for a way to measure acceleration in three orthogonal directions. However, the accelerometer unit of Petelenz's apparatus "measures three orthogonal accelerations" [0025]. Lehrman provides a clip (23) for attaching the system to the body (Figure 1). He also teaches a sensor which in operation repeatedly sensed "accelerative phenomena as a function of at least one accelerative characteristic" in order to determine if its within environmental tolerance and generated state indicia (column 2, lines 12-20). He further states that the processor operates to compare indicia to a threshold and controls a "suitable indicating means to initiate and alarm event" (columns 2-3, lines 59-66 and 1). It would have been obvious in view of Petelenz to perform these tasks with Lehrman's tool provided in order to monitor movement of a subject.
- Regarding claim 11, Lehrman teaches summing outputs from the accelerometer to determine the last stable position or threshold (column 7, lines 60-67). It would have been obvious that summing would require more than one, or a plurality of these outputs.
- Regarding claim 12, Lehrman teaches a threshold of 2 seconds [0029] to be assumed. He doesn't teach how this is reached, but it would have been

obvious to one having ordinary skill in the art through routine experimentation to determine the time period by timing how long it takes people to fall.

- Regarding claim 15, Lehrman teaches the performance threshold responsively adapts to statistical changes in previously determined performance indicia over time (column 3, lines 14-17, claims 25, 28).
- Regarding claim 16, Lehrman teaches a monitoring apparatus with a portable monitor clip (23) for attaching the system to the body (Figure 1). He also teaches a sensor which in operation repeatedly sensed "accelerative phenomena as a function of at least one accelerative characteristic" in order to determine if its within environmental tolerance and generated state indicia (column 2, lines 12-20). Lehrman further states that the processor operates to compare indicia to a threshold and controls a "suitable indicating means to initiate and alarm event" (columns 2-3, lines 59-66 and 1). Lehrman teaches summing outputs from the accelerometer to determine the last stable position or threshold (column 7, lines 60-67). Lehrman doesn't teach that the accelerometer determines acceleration in three orthogonal directions. However, the accelerometer unit of Petelenz's apparatus "measures three orthogonal accelerations" [0025]. It would have been obvious to apply this to Lehrman's tool in order to determine the body's three-dimensional movement.
- Regarding claim 18, Lehrman doesn't teach that the accelerometer determines acceleration in three orthogonal directions. However, the accelerometer unit of Petelenz's apparatus "measures three orthogonal

accelerations" [0025]. It would have been obvious to apply this to Lehrman's method in order to determine the body's three-dimensional movement.

6. Claims 8, 9, 17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lehrman et al. and Petelenz et al. as applied to claim 3 above, and further in view of Gill et al (02/35997).

- Regarding claim 8, the apparatus of Lehrman fails to teach the first acceleration threshold as being an absence of normal expected movement or the event initiated as a result. Gill teaches that an indication of a fall is that a period of low or no motion frequently follows it. It would therefore have been obvious in view of Gill to have a threshold at the lowest point of expected movement in order to determine if a fall has occurred.
- Regarding claim 9, the apparatus of Lehrman doesn't teach three different thresholds for comparing three indicia over three time periods. However, Petelenz teaches measuring both the angular rate of change of the body angle and the acceleration amplitude severity thresholds to a time threshold [0007]. It would have been obvious to combine these two measurements with Gill's indicator in order to increase the accuracy of the tool. It would also have been obvious to look for these events at certain periods of time, as one having ordinary skill in the art would know that they each occur at different times in the falling sequence.

- Regarding claim 17, the apparatus of Lehrman doesn't teach three different thresholds for comparing three indicia over three time periods. However, Petelenz teaches measuring both the angular rate of change of the body angle and the acceleration amplitude severity thresholds to a time threshold [0007]. It would have been obvious to combine these two measurements with Gill's indicator in order to increase the accuracy of the tool. It would also have been obvious to look for these events at certain periods of time, as one having ordinary skill in the art would know that they each occur at different times in the falling sequence.
- Regarding claim 19, the apparatus of Lehrman doesn't teach one of the three orthogonal directions to be in the vertical direction or within a designated angle of the vertical direction. Petelenz's apparatus teaches that one of the axes of the accelerometer is "more or less vertical" [0025]. It would have been obvious in view of Petelenz to make an axis vertical to determine if vertical acceleration was taking place.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RENEE DANEGA whose telephone number is (571)270-3639. The examiner can normally be reached on Monday through Thursday 7:30-5:00 eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on (571) 272-4726. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RAD

/Max Hindenburg/
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